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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,951	12/30/2003	Peter Gnauck	(Z) 00052 P US	6576

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EXAMINER

NGUYEN, KIET TUAN

ART UNIT PAPER NUMBER

2881

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/500,951

Applicant(s)

GNAUCK ET AL.

Examiner

Kiet T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 15-18 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Objected Informalities***

The disclosure is objected to because of the following informalities:

**In The Claims**

Claim 14, line 1, "A particle beam device, particularly a scanning electron microscope" should be – A scanning electron microscope --.

Claim 15, line 1, "The particle beam device" should be – The scanning electron microscope --.

Claim 16, line 1, "The particle beam device" should be – The scanning electron microscope --.

Claim 16, lines 1-2, "that is arranged and adapted so that" should be deleted.

Claim 16, line 6, "preferably smaller than 0.5 kV," should be deleted.

Claim 17, line 1, "The particle beam device" should be – The scanning electron microscope --.

Claim 18, line 1, "The particle beam device" should be – The scanning electron microscope --.

Claim 18, lines 1-2, "that is arranged and adapted so that" should be deleted.

Claim 21, line 1, "The particle beam device" should be – The scanning electron microscope --.

Appropriate correction is required.

***Objected Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the needle electrode or

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an electrode of thin wires as recited in claim 12; and an electrode surrounding the scintillator in a form of a pot that tapers conically to a point on a side remote from the scintillator and comprises an opening on a side remote from the scintillator as recited in claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Applicant is requested to provide fig. 4 because it is missing from the drawings.***

***Rejection Under 35 U.S.C. 112, Second Paragraph***

Claims 9-11 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the sample potential" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the collector grid" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the conductive coating" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "the sign of the potential of the collector electrode" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

***Rejection Under 35 U.S.C. 102(e)***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

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Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Essers (6,707,041).

Essers (6,707,041) discloses, in figs. 1-10, a detector for a scanning electron microscope with variable pressure. The detector for detecting electrons and light includes a scintillator 56 having electrically conductive coatings 52, 53 and 54 for transparent the light (see col. 10, lines 39-40) in form of grid or strip and applied with the potentials U7a, U7b and U8; a photodetector 82; a light guide 56 or 86 made of scintillator material; a collector electrode 52 applied with the potential that is different with the scintillator 56; amplifiers connected to at least one of the collector and to the conductive coating (see col. 8, lines 1-4); a gas cascade arising between the collector electrode and the conductive coating by a secondary electron cascade due to impacts in the gas (see col. 2, lines 41-67); the potential applied to the collector electrode 52 at 150-1,000 V (see col. 9, lines 4-5); and a needle electrode 31 surrounding the scintillator 56 in a form of a pot that tapers conically and comprises an opening on the side of a sample 11.

Claims 15-18 and 21 would be allowable if rewritten or amended to overcome the objection(s) and the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action.

**Reasons for indicating allowable subject matter**

The prior art fails to disclose a detector for varying pressure ranges in a sample chamber of a scanning electron microscope, which includes a pressure meter in the sample chamber for measuring the pressure in the sample chamber to control the potential that is applied to a scintillator as recited in claim 15.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Danilatos (4,897,545) discloses an electron detector for use in a gaseous environment; and

2) Suzuki et al. (5,396,067) discloses a scanning electron microscope having an electron detector used in a gaseous environment.

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet T. Nguyen whose telephone number is 571-272-2479. The examiner can normally be reached on Monday-Friday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KN



KIET T. NGUYEN  
PRIMARY EXAMINER